August 6, 2018



National Freedom of Information Officer U.S. Environmental Protection Agency 1200 Pennsylvania Avenue, NW (2822T) Washington, DC 20460

### NORTON ROSE FULBRIGHT

Norton Rose Fulbright US LLP 1301 McKinney, Suite 5100 Houston, Texas 77010-3095 United States

Eddie Lewis
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Re: Freedom of Information Act Request

Dear Sir or Madam:

Pursuant to the Freedom of Information Act (5 U.S.C. § 552 et seq.) ("FOIA"), we request copies of all documents or records listed below created by, submitted to, or otherwise in the possession of the United States Environmental Protection Agency ("EPA"). Specifically, we seek the following documents described below:

- 1. All documents regarding or relating to all applications submitted to the EPA to request an alternative means of emission limitation under 40 C.F.R. § 60.5398a of New Source Performance Standard ("NSPS") Subpart OOOGa. Without limitation, we are requesting all reports, memoranda, correspondence applications and other documents generated, received by, or reviewed by the EPA as part of its consideration of such applications for alternative means of emission limitations.
- 2. All documents regarding or relating to an application for approval of modifications to Reference Method 20 for turbine performance tests under NSPS Subpart GG, which led to an EPA Applicability Determination dated March 15, 2011 (Control Number 0300011). 1 Without limitation, we are requesting all reports, memoranda, correspondence and other documents generated by, received by, or reviewed by the EPA as part of its consideration of the application and/or whether to approve the application.
- 3. All documents regarding or relating to EPA's approval, dated February 5, 2018, of an application for use of process mass spectrometers as an alternative to 40 C.F.R. Part 63, Subpart CC procedures requiring calorimeters or gas chromatographs to measure net heating value in flare vent gas.<sup>2</sup> Without

<sup>1</sup> See Attachment A.

<sup>&</sup>lt;sup>2</sup> See Attachment B.

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limitation, we are requesting all reports, memoranda, correspondence and other documents generated, received by, or reviewed by the EPA as part of its consideration of the application and/or whether to approve the application.

4. All documents regarding or relating to EPA's approval, dated May 30, 2018, of an application for use of a new test method, as an alternative to test Method 26 or 26A, for demonstration of compliance with hydrogen chloride limits and quality assurance of CEMS under the Mercury and Air Toxics Standards.<sup>3</sup> Without limitation, we are requesting all reports, memoranda, correspondence and other documents generated by the EPA or received by the EPA as part of its consideration of the application and/or whether to approve the application.

In this request, the terms "documents" and "records" are used to mean the following: all reports, records, lists, interagency memoranda, intra-agency memoranda, data, correspondence, opinion letters, ledgers, studies, investigations, schedules, photographs, sound or video reproductions, graphs, catalogues, statements or any other handwritten, typewritten, printed, recorded or graphic material of any kind or description whatsoever maintained by the EPA in any format, including in electronic formats.

Please provide us with copies of the above-listed documents or records to the extent that they are reproducible. To the extent possible, please produce the responsive materials in electronic form.

We are willing to pay reasonable fees associated with processing our request, for search, review, and duplication, up to \$1,000. Our Tax Identification Number is 74-1201087. If such costs to comply with this request are \$1,000 or less, please send the copies directly to the address below via Federal Express Overnight delivery. Our Federal Express account number in order to charge the delivery directly to our firm is 0770-0426-2. Please send the responsive records to:

Mr. Eddie Lewis Norton Rose Fulbright US LLP 1301 McKinney, Suite 5100 Houston, Texas 77010-3095

If the costs reach and will exceed the \$1,000 limit, we request that you contact me at 713-651-3760 with an estimate of the fees necessary to complete the request.

Pursuant to FOIA, we understand that EPA will inform us of whether our FOIA request is granted within 20 days of receipt of this request. In the event that EPA should determine that any of the described documents, or portions of such documents, are

<sup>&</sup>lt;sup>3</sup> See Attachment C.

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exempt from mandatory disclosure under the provisions of 5 U.S.C. § 552(b) and that such documents will not be released voluntarily, we request that you fully describe each document (or portion of such document) withheld, state your reasons for withholding such document or portion thereof, and state your reasons for not invoking your discretionary powers to release such document or portion thereof.

Thank you for your assistance and cooperation with this request. If you have any questions or need further information to respond to this request, please do not hesitate to contact me by phone at 713-651-3760 or by email at eddie.lewis@nortonrosefulbright.com.

Very truly yours,

Eddie Lewis

ECL

# **ATTACHMENT A**



### U.S. Environmental Protection Agency Applicability Determination Index

Control Number: 0300011

Category: EPA Office: NSPS Region 10

Date:

03/15/2001

Title:

Modifications to Test Method 20 for Turbines

Recipient:

Thomas Manson

Author:

Douglas Hardesty

Subparts:

Part 60, GG, Stationary Gas Turbines

References:

Method 20

#### Abstract:

Q: May Phillips Alaska use a 7 point multi-hole probe to identify the two ports with the lowest oxygen concentration in-lieu of the oxygen traverse of the stack in accordance with Reference Method 20 procedures?

A: Yes. EPA believes that the modified method could generate acceptably accurate data.

Letter:

Reply To Attn Of: OAQ-107

Certified Mail - Return Receipt Requested

Mr. Thomas Manson Phillips Alaska, Inc. Alpine Development Project Alpine - HSE - ALP 14 P.O. Box 196860 Anchorage, Alaska 99519-6860

Re: Modifications to Test Method 20 for NSPS GG Turbines

Dear Mr. Manson:

The United States Environmental Protection Agency (EPA) has reviewed Phillips Alaska's February 14, 2001 letter that requested modifications to Reference Method 20 for initial performance tests of a turbine subject to NSPS Subpart GG, at Alpine Development Project, Alaska. EPA has determined that for this case, Phillip Alaska's modifications to Reference Method 20 are acceptable.

Phillip Alaska requested EPA to approve modifications to Reference Method 20, "Determination of Nitrogen Oxides, Sulfur Dioxide, and Diluent emissions from Stationary Gas Turbines" (40 C.F.R. Part 60, Appendix A). Specifically, Phillips Alaska requested the use of a 7 point multi-hole probe to identify the two ports with the lowest oxygen concentration, in-lieu of the oxygen traverse of the stack in accordance Reference Method 20 procedures. EPA believes that for this case, the modified method proposed by Phillips Alaska could generate acceptably accurate data; therefore, Phillips Alaska's request is approved.

If you have questions concerning this letter, please do not hesitate to contact Mr. Kai Hon Shum at (206) 553-2117.

Sincerely,

Douglas E. Hardesty, Manager Federal and Delegated Air Programs Unit

KHS:DH:yd

cc: Jim Baumgartner (ADEC)

# **ATTACHMENT B**



### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

RESEARCH TRIANGLE PARK, NC 27711

Mr. Chuck DeCarlo Marketing Manager Extrel CMS, LLC 575 Epsilon Drive, Suite 2 Pittsburg, PA 15238-2838

FEB 0 5 2018

OFFICE OF AIR QUALITY PLANNING AND STANDARDS

Mr. Tony Slapikas Product Manager for Mass Spectrometry AMETEK, Energy & Process Division 150 Freeport Road Pittsburgh, PA 15238

Dear Mr. DeCarlo and Mr. Slapikas,

I am writing in response to your letter dated August 18, 2017, requesting approval for use of process mass spectrometers as part of an alternative to testing procedures utilizing calorimeters or gas chromatographs to measure Net Heating Value (NHVv<sub>G</sub>) in flare vent gas as required under 40 CFR Part 63, Subpart CC – National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries. The owner or operator of facilities subject to Subpart CC must measure flare vent gas composition to determine NHVv<sub>G</sub> in units of British Thermal Units per standard cubic foot (BTU/SCF). This BTU/SCF determination may be performed using a calorimeter capable of continuously measuring, calculating, and recording NHVv<sub>G</sub> at standard conditions (40 CFR 63.670 (j)(3)) or equipment that determines the concentration of individual components in the flare vent gas (40 CFR 63.670 (j)(1)), such as a gas chromatograph, and, if desired, may directly measure the hydrogen concentration in the flare vent gas following the methods provided in 40 CFR 63.670 (j)(4). All monitoring equipment must meet the applicable minimum accuracy, calibration and quality control requirements specified in Table 13 and §63.671 of Subpart CC.

In your letter, you propose to use a process mass spectrometer analyzer and the following measurement approach as an alternative to measure  $NHV_{VG}$ :

- The owner or operator of the affected facility will perform a pre-survey to determine the list and concentration of components that are present in flare vent gas feed. This pre-survey will be used in part to:
  - a) Determine an appropriate analysis method for the site-specific refinery flare vent gas;
  - b) Create a list of vent gas components to be included in calibration gas cylinders to be used to evaluate the quality of the measurement procedure used to determine NHVvg;
  - c) Define calibration standards to be prepared by a vendor at a certified accuracy of 2 percent and traceable to NIST; and
  - d) Perform an initial calibration to identify mass fragment overlap and response factors for the target compounds.

2) The process mass spectrometer will be calibrated using calibration gas standards consisting of a mix of the compounds identified in the site specific flare gas pre-survey.

3) During flare gas analysis, compounds that are not identified during the pre-survey and that have mass fragments identical to the compounds found during the pre-survey will be included in the calculation of NHVvg.

4) Calibration error (CE) for each component in the calibration blend will be calculated using the following equation:

$$CE = \frac{C_m - C_a}{C_a} \times 100$$

Where:

 $C_m$  = Average instrument response, (ppm)  $C_a$  = Cylinder gas value or tag value, (ppm)

5) The average instrument CE for each calibration compound at any calibration concentration must not differ by more than 10 percent from the cylinder gas value or tag value.

6) For each set of triplicate injections at each calibration concentration for each calibration compound, any one introduction shall not deviate more than 5 percent from the average concentration measured at that level.

Your supporting information included Method 301 calculations that showed acceptable bias and precision when you measured a mixture of gases from a vendor certified gas cylinder. Your request also includes reference to facilities needing to monitor flare gas composition continuously to effectively maintain flare efficiency while compensating for changes in the flare gas composition.

With this letter, we are approving your request to substitute continuous process mass spectrometry for continuous gas chromatography as allowed in 40 CFR 63.670 and 63.671 predicated on both your proposed use of these process mass spectrometers as described above and the additional provisos listed below:

1) You must meet the requirements in 40 CFR 63.671 (e)(1) and (2) including Table 13 requirements for Net Heating Value by Gas Chromatograph.

2) You may use the alternative sampling line temperature allowed in 40 CFR 63, Subpart CC, Table 13, under Net Heating Value by Gas Chromatograph.

3) You must meet applicable Performance Specification 9 (40 CFR part 60, appendix B) requirements for initial continuous monitoring system acceptance including, but not limited to:

 Performing a multi-point calibration check at three concentrations following the procedure in Section 10.1; and

 Performing periodic process mass spectrometer calibrations as directed for gas chromatographs in 40 CFR 63, Subpart CC, Table 13.

4) You may augment the minimum list of calibration gas components found in 40 CFR 63.671(e) with compounds found during the pre-survey as needed to develop a site-specific analysis method.

- 5) For unknown gas components that have similar analytical mass fragments to calibration compounds, you may report the unknowns as an increase in the overlapped calibration gas compound.
- 6) For unknown compounds that do not produce mass fragments that overlap calibration compounds, you may use the response factor for the nearest molecular weight hydrocarbon in the calibration mix to quantify the unknown component's NHVvg. This requirement parallels the requirements in 40 CFR Part 63.671 (e)(3) for gas chromatographs.
- 7) You may use the response factor for n-pentane to quantify any unknown components detected with a higher molecular weight than n-pentane.
- 8) You must meet all other applicable generic requirements of §§63.670 and 63.671 for measurement of NHVvg (i.e., measurement requirements not specifically targeted to gas chromatographs).
- A copy of this approval letter must be included in the report for each testing program where these alternative testing procedures are applied.

Since this alternative test method approval under 40 CFR 63.7 (f) is appropriate for use at all facilities subject to 40 CFR 63, Subpart CC, we will announce on EPA's Web site (https://www.epa.gov/emc/broadly-applicable-approved-alternative-test-methods) that the alternative method is broadly applicable to determination of NHV<sub>VG</sub> under this subpart.

If you have any questions regarding this approval or need further assistance, please contact Ray Merrill at (919) 541-5225 or *merrill.raymond@epa.gov*, or Robin Segall at (919) 541-0893 or *segall.robin@epa.gov*.

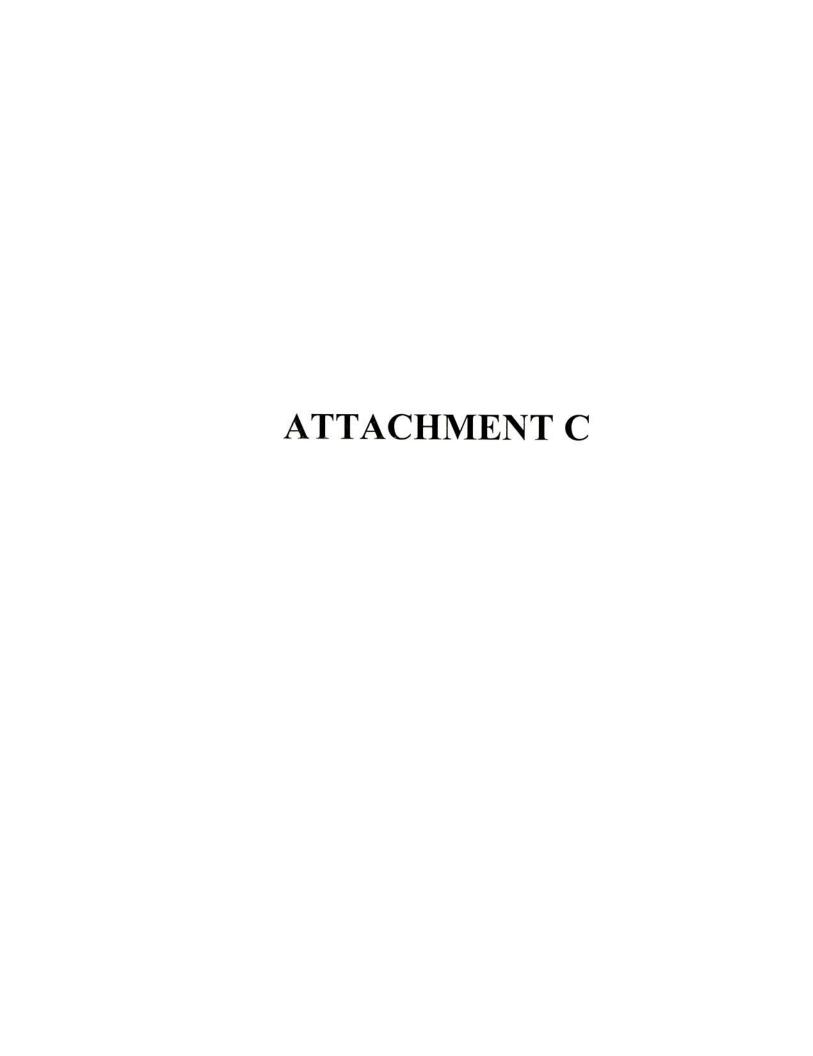
Sincerely,

Steffan M. Johnson, Group Leader Measurement Technology Group

Loin A. Segall for SMJ

cc.

Gerri Garwood, EPA/OAQPS/SPPD Maria Malave, EPA/OECA/OC Brenda Shine, EPA/OAQPS/SPPD EPA Regional Testing Contacts





### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

### RESEARCH TRIANGLE PARK, NC 27711

Mr. Grant E. Dunham
Senior Research Engineer
EERC
University of North Dakota
15 North 23<sup>rd</sup> Street, Stop 9018
Grand Forks, ND 58202

MAY 3 D 2018

OFFICE OF AIR QUALITY PLANNING AND STANDARDS

#### Dear Mr. Dunham:

This letter is our response to your submittal dated August 29, 2017, to Robin Segall of my staff, requesting approval on behalf of the Electric Power Research Institute, as well as coal-fired utilities subject to the Mercury and Air Toxics Standards (MATS), for use of a new test method in lieu of Method 26 or 26A (40 CFR 60, Appendix A) for (1) demonstration of compliance with hydrogen chloride (HCl) emission limits and (2) certification and ongoing quality assurance of HCl continuous emissions monitoring systems (CEMS). The EPA's Office of Air Quality Planning and Standards, as the delegated authority, must make the determination on any major alternatives to test methods and compliance testing procedures required under 40 CFR parts 59, 60, 61, 63, and 65.

You explain that the MATS rule (40 CFR part 63, Subpart UUUUU, National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-fired Electric Utility Steam Generating Units) has led to a significant increase in Method 26 or 26A testing to collect data to demonstrate regulatory compliance with the HCl emissions limit on a quarterly basis or, if an electric generating unit (EGU) demonstrates compliance using an HCl CEMS, yearly relative accuracy testing. Because of the relatively high expense, number of personnel hours related to testing, and elaborate setup and recovery involved with Method 26 and 26A, you and your colleagues sought a simpler, cheaper method for measuring HCl emissions from coal combustion sources.

The alternative method proposed in your submittal relies on a sorbent trap technology approach similar to that of Method 30B for vapor phase mercury (40 CFR part 60, Appendix A). You provided a detailed method protocol with your request as a potential 'Other Test Method' to be posted on the EPA Emission Measurement Center website at <a href="https://www.epa.gov/emc">www.epa.gov/emc</a>. You assert that this method is simpler to perform, less expensive, and more robust in that it avoids sample contamination and does not require the use or transport of harmful chemicals. You also assert that your candidate method has the potential for improved sensitivity and equal or better accuracy when compared with Methods 26 and 26A. In particular, you have requested approval of this alternative method for application to coal-fired utility boilers with low moisture coal combustion flue gases at temperatures above 100 degrees C based on the data and information you have provided, which are described below.

In your August submittal and earlier correspondence, you provided Method 301 (40 CFR part 63, Appendix A, 2011 version) field validation test data for your candidate method from tests conducted at five coal-fired utility boilers using the nine-run, paired-train sampling approach

with Method 26A conducted non-isokinetically as the reference or 'validated' method. Successful Method 301 test programs were conducted at three of the five electric utility boilers (Plants 1, 2 and 4) and the bias and precision results of those test programs are summarized in the table below.

Facility	Fuel/Boiler Configuration/ HCl Emission Level	Emission Controls	Method 301 Results
Plant 1	Lignite coal Overfire air 0.23 ppm at 3% O <sub>2</sub>	Low-NO <sub>x</sub> burners Eiectrostatic precipitator Wet limestone scrubber	-3.5% Relative bias -Precision not significantly different than Method 26A
Plant 2	Lignite coal Overfire air 1.36 ppm at 3% O <sub>2</sub>	Electrostatic precipitator	-9.6% Relative bias -Precision not significantly different than Method 26A -3.9% Relative bias -Precision not significantly different than Method 26A
Plant 4	Bituminous coal Circulating fluidized bed (CFB) 44.3 ppm at 3% O <sub>2</sub>	Selective non-catalytic reduction Fabric filter Limestone feed to CFB	

The data from Plants 3 and 5 did not meet Method 301 requirements. The data collected at Plant 3, a small unit with a flooded-disc wet scrubber and flue gas containing entrained water droplets, yielded data that could not be used to determine the precision and bias of the candidate method. At Plant 5, only three paired-train runs were completed, which did not allow conduct of the Method 301 statistical calculations to determine bias and precision.

Additionally, you provided the results of several laboratory evaluations of the candidate method including ruggedness testing, spike recovery tests, and an evaluation of precision between spiked and unspiked traps. The ruggedness testing used a system capable of generating simulated coal combustion flue gas containing baseline levels of O<sub>2</sub>, CO<sub>2</sub>, NO, NO<sub>2</sub>, N<sub>2</sub>, and moisture where SO<sub>2</sub> and HCl could be varied and Cl<sub>2</sub>. Br<sub>2</sub>, HBr, and NH<sub>3</sub> could be introduced. The candidate method with one spiked and one unspiked trap and a quality-assured Fourier transform infrared spectroscopy (FTIR) were used to sample the simulated flue gas during each of ten experimental conditions. Quality-assured FTIR was chosen as the reference measurement for these experiments for its ability to deliver near real-time results and to avoid some of the potential biases of Method 26 and 26A. Results were analyzed to assess the effects of Cl<sub>2</sub>, Br<sub>2</sub>, HBr, SO<sub>2</sub>, and NH<sub>3</sub> on HCl capture and HCl spike recovery for the candidate method.

In two experiments with 500 ppmv of SO<sub>2</sub> and low HCl present (levels of 0.5 and 1.0 ppmv), the average candidate method values were within 10 percent of the average FTIR values and the candidate method precision was also acceptable by Method 301 standards. In three experiments,

<sup>&</sup>lt;sup>1</sup> "Request for Approval of OTM-XX as an Alternative to EPA Method 26," Final Report, Energy & Environmental Research Center, University of North Dakota, August 2017.

2.0 ppmv Cl<sub>2</sub> was introduced to the simulated coal combustion flue gas first in the presence of SO<sub>2</sub>, then in the presence of HBr and HCl, and finally with HCl alone. The results for each of the three experiments showed a positive bias in the candidate sorbent trap method measurement of HCl with Cl<sub>2</sub> being measured as HCl. In addition, as indicated by the real-time FTIR measurements, the presence of HBr or SO<sub>2</sub> resulted in some conversion of the Cl<sub>2</sub> to HCl in the gas manifold prior to the gas entering the sorbent traps. In experiments where HBr was present without Cl<sub>2</sub>, the HBr did not appear to bias HCl measurement by the candidate method. One experiment examined HCl measurement in the presence of both Cl<sub>2</sub> and NH<sub>3</sub>. The FTIR measurements for this experiment indicated no loss (reaction) of NH<sub>3</sub> in the gas manifold system while a small amount of the Cl<sub>2</sub> introduced converted to HCl in the manifold. The candidate method again measured the majority of the Cl<sub>2</sub> as HCl.

You submitted spike recovery studies conducted by your collaborators, The Ohio Lumex Company, as well as EERC. For the candidate method, spiking is used both to confirm the analytical procedure and to assess the matrix effects on the field samples. A total of 27 samples were spiked at HCl levels ranging from 30 to 1200  $\mu g$ . For all but one sample, the spikes were recovered within 10 percent of the spiked amount. For four spiked traps taken to the field and sampled, the spike recoveries were also within 10 percent. A third experiment evaluated the precision between paired spiked (100  $\mu g$  HCl) and unspiked sorbent traps. Six of eight data sets of two to four pairs of traps yielded results that showed no statistical difference between the pairs. The remaining two data sets showed a 2.9 and 5.0 percent difference.

Also included in your submittal was a Method 301 detection limit study performed on the HCl sorbent trap analysis by your collaborators, The Ohio Lumex Company. This analytical study yielded a limit of detection (LOD) of 6.7 µg mass of HCl on a sorbent trap or 0.074 ppm, HCl assuming a nominal sampling rate of 1.0 L/min and sample run time of 1 hour, which is approximately the same as the estimated LOD for Method 26A using a 1-hour sampling time.

Finally, you noted that two other organizations had conducted comparisons of the candidate method with (1) Method 26 (40 CFR part 60, Appendix A) and/or (2) FTIR measurements. The first organization conducted comparison testing of the alternative method and Method 26 on units at two facilities, both burning Powder River Basin coal and controlled with dry sorbent injection and Br<sub>2</sub> addition, one with an electrostatic precipitator and the other with a fabric filter. These comparisons were made at HCl concentrations less than a quarter of the MATS emission limit and showed an average relative difference between the two methods of 8.2 and 7.6 percent, respectively.

We have reviewed your submittal in detail and thoroughly considered the performance of the candidate test method, which is posted as 'Other Test Method 40' or OTM-40 on EPA's Air Emission Measurement Center website at <a href="https://www.epa.gov/emc/emc-other-test-methods">https://www.epa.gov/emc/emc-other-test-methods</a>. With this letter, we are approving OTM-40 for application to affected sources under 40 CFR part 63, Subpart UUUUU according to the stated provisos listed later in this letter based on the following considerations:

In view of the results of the ruggedness testing you submitted, we have concerns with the
potential for high bias in the HCl measurement when Cl<sub>2</sub> is present in the gas matrix;
however, we contemplated approval of your candidate method in consideration of several

studies<sup>2 3 4</sup> which have yielded data suggesting that Cl<sub>2</sub> formed during coal combustion is relatively unstable, minimized in the presence of SO<sub>2</sub>, and the resulting levels of Cl<sub>2</sub> in the gases emitted are low in comparison to the levels of HCl.

- The Method 301 test program data provided demonstrated that OTM-40 has acceptable bias and precision when compared to Method 26A when sampling low moisture emissions with no entrained water droplets from utility boilers combusting coal.
- The Method 301 level of detection (LOD) determination for OTM-40 demonstrated an LOD of 0.074 which is comparable to that of Method 26A and adequate for demonstrating compliance under Subpart UUUUU.
- An HCl test method following the sorbent trap approach of Method 30B would be a
  beneficial option considering cost; simplified sampling, sample storage, and sample
  shipping procedures; and the advantage of site-specific method performance obtained for
  each test program using NIST-traceable standards.

We are approving your proposed alternative test method, OTM-40, with the following required provisos:

- This alternative test method approval is applicable only to coal-fired electric utility steam
  generating units subject to 40 CFR part 63, Subpart UUUUU, with low moisture
  combustion flue gases at temperatures above 100 degrees C (212 degrees F) with no
  entrained water droplets. The alternative method may be used for both quarterly
  compliance testing and relative accuracy testing of HCl CEMS under Subpart UUUUU.
- You must notify the responsible agency before use of this alternative and OTM-40, and notification should include a copy of this letter.
- You must include a copy of this letter with each test report presenting results of testing using OTM-40. As noted on OTM-40, you must also submit of the test report for your first two applications of this alternative method for compliance and/or relative accuracy testing to Robin Segall of my staff.
- Once an affected source chooses to use this alternative method, it must continue to be
  used until the owner/operator receives approval from the responsible agency to use
  another method (see §63.7(f)(5)).

<sup>&</sup>lt;sup>2</sup> Xie, Y. et al. The Effect of Sulfur Dioxide on the Formation of Molecular Chlorine during Co-combustion of Fuels. *Energy and Fuels* **2000**, *14*, *p*. 597-602.

<sup>&</sup>lt;sup>3</sup> Zhao, Y. et al. Effects of Sulfur Dioxide and Nitric Oxide on Mercury Oxidation and Reduction under Homogeneous Conditions. J. Air & Waste Mange. Assoc. 2006, 56, p. 628-635.

<sup>&</sup>lt;sup>4</sup> Lighty, J.S. et al. Fundamentals of Mercury Oxidation in Flue Gas. 2008, DOE Grant Number DE-FG26-03NT41797.

• Use of this alternative denotes acceptance of possible high biases caused by the presence of Cl<sub>2</sub>.

Because we have approved this alternative method for application to a subgroup of sources under 40 CFR part 63, UUUUU, we will post this letter as ALT-129 on the EPA website at <a href="https://www.epa.gov/emc/broadly-applicable-approved-alternative-test-methods">https://www.epa.gov/emc/broadly-applicable-approved-alternative-test-methods</a> for use by other interested parties.

If you have any questions regarding this approval or need further assistance, please contact Robin Segall of my staff at (919) 541-0893 or segall.robin@epa.gov.

Sincerely,

Steffan M. Johnson, Group Leader Measurement Technology Group

cc: Sara Ayres, OECA/OC James Eddinger, OAQPS/SPPD

> Steven Fruh, OAQPS/SPPD Naomi Goodman, Electric Power Research Institute

Penny Lassiter, OAQPS/SPPD

Marcia Mia, OECA/OC

Jeff Ryan, ORD/NRMRL

Joseph Siperstein, Ohio Lumex

Richard Wayland, OAQPS/AQAD Regional Testing Contacts

Eddie Lewis Norton Rose Fulbright US LLP 1301 McKinney Street Suite 5100 Fulbright Tower Houston, TX 77010-3095 US

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